



Publication office at Bartow, Florida. Entered as second class matter February 16th, 1920, at the post office at Tampa, Florida, under the act of March 3, 1879. Entered as second class matter June 19, 1933, at the post office at Bartow, Florida, under act of March 3, 1879.

Recent Changes In The Florida Citrus Industry

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL ADJUSTMENT
ADMINISTRATION

The rapid growth of the citrus industry in the United States over a relatively short period of time has placed this country in a position of world leadership in the production of oranges and grapefruit. Domestically, the production of grapefruit and oranges constitutes one of the most important tree-fruit industries, being exceeded only by the apple industry in total farm value.

Numerous problems in production and marketing have accompanied this rapid development. Many of these problems have become intensified as plantings have increased and bigger crops have resulted. Out of necessity, growers in various producing areas united their efforts in working out needed solutions. These efforts are being supplemented in various ways through the aid of State and Federal government agencies.

Scope Of The Industry

More than 65,000 growers are engaged in the production of oranges and grapefruit. Because of the peculiar climatic conditions under which these fruits must grow, the main producing areas are confined to the Southern regions of the United States. Practically all of the commercial citrus fruits are grown in Florida, California, Arizona, and Texas, with much smaller amounts grown in Alabama, Louisiana, and Mississippi. Florida and California together produce about 97 percent of

the oranges, while Florida and Texas together grow about 85 percent of the grapefruit.

Recent surveys show that in the four leading states, nearly 700,000 acres of land are devoted to oranges and grapefruit. Of this total, over 452,000 acres are in oranges, 187,100 acres are in grapefruit, and 26,700 acres are in tangerines.

The rapid growth of the citrus industry in the past two decades brought sharp increases in the production of oranges and grapefruit. In the period from 1919-20 through 1924-25, production of oranges for all States averaged 30,200,000 boxes a season, rose to an average of 41,700,000 boxes in the period from 1925-26 through 1930-31, and went on to 53,400,000 boxes in the period from 1931-32 through 1936-37. Production of oranges in the 1937-38 season was 68,600,000 boxes, an all-time record. The rate of increase followed by grapefruit has been almost twice that of oranges. Production rose from an average of 7,900,000 boxes in the period from 1919-20 through 1924-25, to 11,900,000 boxes in the period from 1925-26 through 1930-31, and then jumped to an average of 19,200,000 boxes from 1931-32 through 1936-37. The highest production was 30,700,000 boxes in the 1936-37 season. 1937-38 production is around 28,000,000 boxes.

Recent increases in the total vol-

ume of oranges and grapefruit available for markets, competition from other fruits, and a reduced level in the money income of consumers have combined to force the industry to work harder in improving marketing conditions and expanding outlets. An outstanding development in this direction has been the increased use of citrus fruits, particularly grapefruit, for canning purposes. Also, as a result of bigger production, the citrus industry as a whole has become more impressed with the need for marketing oranges and grapefruit in an orderly manner.

Farm Value of Citrus Crops

The citrus industry makes a substantial annual contribution to national farm income. The farm value of citrus production on the basis of fruit at the packing house, dropped sharply during the 1932 depression but turned upward with the improvement in general economic conditions which followed. Farm value of orange and grapefruit crops from 1925-26 through 1929-30 averaged \$135,400,000 a season. In the next 5 years, farm value averaged \$92,200,000. The low point was reached in the 1932-33 season, when the orange and grapefruit crops had a farm value of \$68,937,000. Since the 1934-35 season, the farm value of the two crops has averaged \$113,900,000.

Oranges alone had a farm value
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The Importance Of Citrus

... In The Diet

By E. Glenn Grimes
ATTORNEY
FLORIDA CITRUS COMMISSION

In all the world, and in all the medical history, no one has ever been able to better this simple recipe for maintaining good health—plenty of fresh air and sunshine, balanced diet, proper exercise, and sufficient sleep.

But we are a race of human beings—each with a mind of his own, each with his individual likes and dislikes, his individual learnings, opportunities and appetites. Hardly a day goes by when each of us doesn't break at least one of these simple rules. Some of us work or play too hard, some eat or drink too heartily, or concentrate too much on foods we like best. Others keep irregular hours or indulge in other excesses.

The result is that we don't always feel "fit as a fiddle." In time we may undermine our health to the point where we become sick, or at least easy prey to diseases of one kind or another.

The purpose of this little talk is not to dispense advice to those who are actually ill. Only a physician should do that. Rather, its purpose is to help the great majority of us to keep well and fit and to prevent our daily rule-breaking from distressing us to the point where we are "sick enough to go to the doctor's."

Everyone knows, of course, that each effort we make, whether mental or physical, uses up some store of energy or reserve in terms of the substances that repose in our bodies. For the constant replacing of these substances we depend largely on the things we eat and drink.

Naturally, no one food is sufficient to supply all the needs of the body. Milk comes closest—but even if we could get all we need from milk, who'd want to stick to a milk diet forever? We all like our meats, and potatoes, and countless other foods—and we like them in as great variety as possible. Some foods, however, as so rich in certain essential elements that they should be consumed regularly and in good amounts. Narrowing this down even farther, some of these foods are so delicious, so appetizing, that we like to have them daily.

As you have probably guessed, we are leading up to citrus fruits, and we believe you'll agree with all we have said thus far. Oranges, grape-

fruit and tangerines have become such welcome and familiar items in our daily diet that we're apt to think of them merely as something "good to eat" and forget how good they are for us to eat. Let's consider for a moment just why these luscious fruits are beneficial.

For our present purpose, the most important values to know about in oranges, grapefruit and tangerines are their mineral salts and vitamins. We are not going to make any extravagant claims for citrus fruits and try to fool you into believing you should eat nothing else. Let us take up these values one at a time.

Citrus fruits are a good food source of such mineral salts as calcium, potassium and iron. These act to keep the blood in "alkaline balance." The extent to which the blood inclines either to alkalinity or acidity is, in normal persons, so small as to be actually immeasurable. Yet it is essential to life itself that the "balance" be maintained.

The body needs both acid and alkali, and gets them from the things we eat. They are stored in the body tissues. The amount of each to be found in the tissues at any one time largely depends on the things we have eaten. For instance, if we have eaten too abundantly of meats, our "balance" is apt to be on the "acid" side. Moreover, colds, loss of sleep or any kind of fatigue, all tend to produce an acid condition. Then, to restore a normal balance, alkali must be drawn from the store in the body.

So you can see why citrus fruits being so rich in mineral salts, or "alkalizers," are helpful in maintaining the alkaline base which is necessary to good health. In addition, all citrus fruits contain citric acid, which gives them their tart, clean taste. In the body, citric is burned, like sugar, to give quick energy. Contrary to what you might suppose, citric acid can not cause "an acid condition."

Of all the health benefits of citrus fruits, however, their vitamin contribution is the most important. They contain vitamins A, B and C in small quantities. But—they are one of the richest known food sources of vitamin C, a vitamin that helps

build vitality and fight disease. In fact, oranges contain so much vitamin C that orange juice was selected as a standard by which to measure the amount of vitamin C in other foods. For any food to have even half as large vitamin C content as oranges is considered a pretty high rating. The body simply must have vitamin C—life could not be sustained without it; wounds would never heal, teeth and bones could never get strong and sound.

Some animals produce their own supply within their bodies. But human beings must get their vitamin C from outside sources. Of course, there are many sources of vitamin C but isn't it good to know that foods as delicious as citrus fruits contain such generous quantities of this vital element?

At this point, you might very well ask—"what did people do years ago before the vitamin C was discovered?" The answer is—they got their vitamin C even though they didn't know it, and we know now that when they didn't get it they died. The Chinese, centuries ago, recognized the "medicine" value of oranges even though they didn't know just what that value was. Certainly they wouldn't have called it "vitamins" anyway. And over 150 years ago, the British Navy officials recognized the value of citrus juices in making it mandatory for all British seamen to take a given quantity of "lime," really sour Spanish orange, juice daily as a preventative of scurvy. In fact, that's where the British sailor got his nickname "Limey."

Florida oranges, size for size, contain more juice. Not only because they're just naturally juicier, but also because their skins are so thin, which leaves more room for juice. And, of course, the more juice, the more mineral salts, the more vitamins, the more health.

Florida grapefruit we think is superior because of its tart refreshing taste, a taste like none other in the world. It wakes up your taste, makes your mouth feel all fresh and clean. And it's right up alongside Florida oranges in vitamin richness.

Practically all the tangerines we get in America are Florida tanger-

(Continued on page 7)

A Producer's View Of Citrus Growing And Marketing Problems In Florida . . .

By W. B. Hills

About 19 years ago I purchased a forty-five acre young grove, after spending a year in working in various branches of growing and packing.

While my grove was growing up so to speak, I began to operate other groves for non-resident owners.

At that time Florida's total production of citrus was about eleven million boxes and growers enjoyed profitable returns from their crops. We did not grow more than could be consumed, and fruit was not rushed to market, while all low grades were hauled to the woods.

Now our production runs as high as fifty million boxes and in place of destroying low grades it is canned or juiced, cutting into the fresh fruit consumption. Due to such heavy production we start our seasons earlier and much of our fruit goes to market before it has satisfactory eating quality.

As long as we have such a volume I believe one of the most important steps now is for our experiment station and the fertilizer companies to find some means of maturing the eating quality of our midseason fruit earlier.

We are now forced to gas and color-add the rind of citrus during September, October and November, as our weather is not cool enough to color the fruit naturally during this period.

There is a fortune awaiting someone who can discover some way to change the green color of the rind without having to put the fruit through such a severe punishment of heat and gas.

I found during a recent trip to the retail trade in New England that color adding was not very popular.

As things are now I believe 400 cars of oranges per day of matured fruit would be consumed faster and at a higher price than 150 cars per day of immature fruit earlier in the season.

Marketing Problems

There have been many changes in marketing during the past 15 years. The chain stores in this country now buy direct from the packers in Florida, so they can get the grades and sizes they want, sometimes buying solid cars of one size.

The growth of these chain organizations is one reason why we have so many packing units in Florida and the other reason is that we are so close to the big consuming centers that a large volume of our fruit is handled by truck over improved highways, which also bring a large number of individual truck buyers direct to Florida.

With 450 packing houses shipping fruit every day no one knows where

it is going, but certainly a big improvement would be to regulate the movement to the large auction markets. I doubt if there ever could be any other type of prorate which would be fair to all except to prorate auction markets and eliminate the packing and shipping of third grade fruit.

Unfortunately the marketing agreement dwelt too heavily on prorating fruit that had to be under current control or signed up too far in advance to be 100 percent fair to all.

Many of the co-operative houses do a large F. O. B. business, the only difference is they seem to prefer a current control prorate because their growers are all signed up a year in advance, but the other type of shipper operates on an entirely different basis, whereby a current control would be a hardship to him as he would have to have \$50,000 to \$100,000 in cash to contract crops so far in advance.

The average tree-seller does not desire to make sales more than 30 days before his fruit is picked, so having tried both methods of hand-

ling my fruit I do not see why an F. O. B. order hurts any price level or interferes with glutting any particular market for the sale is made in Florida at a stipulated price and has a definite destination.

Unfortunately we read about constructive changes that are offered, but pass them up or forget them, but one of the most constructive articles recently published was by John A. Snively of Winter Haven, wherein he proposed three separate selling committees. One was to be for the co-operative movement, one for the cash buyer and one for the canning division.

It was Mr. Snively's suggestion that the three committees meet regularly to consider fruit prices and an orderly movement and have an administrator represent the industry as a whole.

A man of recognized ability, well paid, could not help but act on a neutral basis to bring the citrus business of Florida back to a profitable basis and I am sure a man nationally known and respected would help eliminate the idea of one group trying to force the other group out of business.

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THE IMPORTANCE OF CITRUS IN THE DIET

(Continued from page 6)

ines and they're good for all the reasons that make oranges so healthful—plus the fact that they are an exceptionally high source of calcium. That's why they're so especially good for children.

Each year, from September right through to the end of June, Florida citrus fruits goes to market. This year's crop is the finest in years, more abundant which means lower prices, and more luscious than ever.

Try a big glass of orange or grapefruit juice after heavy eating. Use it as an "alkalizing night-cap" at bedtime, or for a 4 o'clock "pick-up" in the afternoon.

I have given you some simple facts about the health-giving properties of Florida citrus. If you would like to have more information on this subject, the Florida Citrus Commission, which I represent today, will be very glad to give it to you. Simply write to the Florida Citrus Commission, Lakeland, Florida, and ask for a copy of the booklet on Citrus and its value to Health.

RECENT CHANGES IN THE FLORIDA CITRUS INDUSTRY

(Continued from page 5)

averaging \$112,100,000 from 1925-26 through 1929-30. In the following 5 years, farm value dropped to an average of \$75,100,000, and in the 1932-33 depression year reached a low of \$56,200,000. Farm value of oranges since the 1934-35 season has averaged \$92,300,000.

Farm value of grapefruit production averaged \$23,200,000 from 1925-26 through 1929-30, and dropped to an average of \$17,009,000 in the following 5 years. Its low point was \$12,700,000 in the 1932-33 depression year. Since the 1934-35 season, farm value of grapefruit has averaged \$21,600,000 a year.

The gains in farm value of both oranges and grapefruit during recent years have been due largely to increases in the income of consumers which permitted the sale of larger supplies at the relatively lower prices.

Prospects for Oranges and Grapefruit

The number of trees now in production and the relatively high proportion of young trees yet to come into full bearing, point to continued increase in production of oranges and grapefruit over the next few years.

The greatest rise may be expected to take place in grapefruit supplies, particularly in the late or seedless varieties. Characteristic of the grapefruit industry is the large proportion of new plantings and young producing trees. With the age of grapefruit trees low, recent crops have increased sharply as young trees came into production and bearing surface increased. Indications are that this rapid rise will continue. It seems quite certain that grapefruit production over the next few years may average in excess of 30,000,000 boxes, compared with an average of 16,869,000 boxes from 1931-32 through 1935-36. The biggest share of the increase is likely to take place in Texas, where young trees predominate and the total number of trees is nearly as great as the number in Florida.

Production of oranges is expected to increase moderately over the next few years largely because about 25 per cent of the trees are less than 11 years old and not in full bearing. Production of oranges may be expected to average from 60,000,000 to 65,000,000 boxes as compared with an average production from 1931-32 through 1935-36 of around 53,000,000 boxes. Most of the

THE CITRUS INDUSTRY

gain can be expected to take place in valencias and other late varieties. Production of navels and other early varieties may not increase greatly.

These prospective increases in production make even more difficult the marketing problems which growers have been trying to solve. Without a substantial increase in consumer buying power, surplus production seems unavoidable. How to meet this difficulty and prevent demoralization of markets and consequent losses to growers is a matter engaging the attention not only of those in the industry but State and Federal agencies as well.

Trends Relating to Florida Grapefruit

The citrus industry of Florida outranks any other type of agricultural activity in the state. The annual value of Florida grapefruit, oranges, and tangerines accounts for nearly 50 percent of the total income from all crops grown in the state.

For a long time Florida has ranked first as the main center of grapefruit production. In the 5 years ending with the 1923-24 season, Florida produced 94 percent of the total United States supply. In the next 5 seasons, that state produced 88 percent of the total. The proportion of Florida grapefruit fell to 77 percent of the total supply in the 5 years ending with the 1933-34 season.

In more recent years, very sharp increases in grapefruit production have taken place in Texas. Gains have also been made in the California-Arizona area. The rapid rise in Texas has placed that State in a position of strong rivalry for the title which Florida has held so long as the leading grapefruit-producing area. In the 1936-37 season, Florida produced 59 percent of the total United States grapefruit supply, and in the 1937-38 season the Florida crop is estimated to be less than 50 percent of the total.

Of the 30,000 growers producing citrus fruits in Florida, grapefruit is grown by about 15,000, or 50 percent. Grapefruit production in Florida has been increasing steadily, and continued moderate gains are expected. In the decade since 1920, grapefruit crops in that State averaged 8,300,000 boxes a year. Since then production has climbed to an average of 13,450,000 boxes. Florida's biggest grapefruit crop came in the 1936-37 season when 18,100,000 boxes were produced.

The bulk of the Florida grapefruit sold in eastern markets. The annual on-tree value of the crop in the past six seasons has represented

March, 1939

about 28 percent of the total value of all citrus fruit grown in Florida. In the period from 1925-26 through 1930-31, the Florida on-tree value of grapefruit averaged \$12,150,000. The value of the crop reached a low point in the 1932-33 season, dropping to approximately \$4,700,000. Since the 1934-35 season, the on-tree value of Florida grapefruit has averaged about \$9,000,000.

Some of the economic trends and forces which have affected the grapefruit industry in Florida are indicated in the following pages.

For about a decade beginning with the 1919-20 season, grapefruit production in the United States followed a gradual upward trend. Since then the increase has been more pronounced, being sharpest in the most recent years.

United States production of grapefruit during most of the period from the 1919-20 season to the 1927-28 season was fairly stable, averaging around 8,400,000 boxes. Practically all of the fruit was grown in Florida and production in Texas and other areas was of minor importance.

The first big crop after that period came in the 1928-29 season when 13,250,000 boxes were produced, of which Florida had 11,314,000 boxes. Texas had around 750,000 boxes of grapefruit. The crop in the 1929-30 season fell to 11,169,000 boxes, but in the 1930-31 season jumped to 18,934,000 boxes. Of this amount Florida had 16,109,000 boxes, a crop 72 percent greater than the average produced in the previous decade. During the next three seasons, United States production of grapefruit averaged almost 15,000,000 boxes.

In the 1934-35 season a crop of 21,367,000 boxes broke all previous records. Of this production, Florida had 15,200,000 boxes, Texas had 2,760,000 boxes, California-Arizona area had 3,407,000 boxes, Florida production fell somewhat in the next season, while crops in the other areas showed a tendency to increase.

All previous records of production were broken in the 1936-37 season, with a United States crop of 30,680,000 boxes of grapefruit. During this season Texas had its first big crop which totaled 9,630,000 boxes, compared with a production of 1,457,000 boxes, the average production in Texas during the 1928-32 period. Florida had its biggest crop of 18,100,000 boxes in the 1936-37 season. Grapefruit production in Florida averaged 11,657,000 boxes in the 1928-32 period.

United States production of grapefruit in the 1937-38 season is esti-

mated to exceed 28,500,000 boxes, of which 13,000,000 boxes are accredited to Florida. The Texas grapefruit crop for the 1937-38 season is around 11,000,000 boxes, breaking all previous records for that state.

Florida Grapefruit Production Price-Trends

Production of grapefruit in Florida has climbed steadily since the early twenties. The rise became sharper in recent years as the productive capacity of trees increased and young plantings came into bearing.

The steady increase in production is accompanied by a downward trend in grower prices.

In the three seasons beginning with the 1920-21 crop, Florida grapefruit production averaged 6,851,000 boxes and the on-tree price averaged \$1.29 per box.

In the next three year period average production rose to 8,591,000 boxes and the on-tree price fell to an average of 94 cents per box. During this period the grapefruit industry felt the effects of the 1924 depression, and in all probability returns to growers fell lower than they would have fallen if more normal conditions had prevailed.

Florida grapefruit production increased to an average of 9,388,000 boxes in the 3-year period beginning with the 1926-27 season. In this 3-year period, no appreciable increase in the average production took place, whereas a significant increase in consumer purchasing power occurred. The on-tree price averaged \$1.28 for the period, although the on-tree price for the 1928-29 crop of 11,314,000 boxes averaged only 84 cents.

Production for the 3-year period beginning with the 1929-30 crop climbed to 11,723,000 boxes and the average on-tree price fell to 89 cents. The industry's first big crop, 16,109,000 boxes, came in the 1930-31 season of that period.

The crop averaged 12,567,000 boxes in the 3-year period beginning with the 1932-33 crop and the price average dropped to 50 cents. The average on-tree price for this period fell below the general downward trend of Florida grapefruit prices, principally because of the 1932 depression and the 15,200,000 boxes produced in the 1934-35 season.

Average production of Florida grapefruit for the 3-year period beginning with the 1935-36 season exceeds 14,000,000 boxes, with an average on-tree price slightly over 65 cents per box. Previous records of Florida production were broken in the 1936-37 season, when 18,100,000 boxes were produced. The on-

tree price for this season averaged 58 cents. The industry was assisted in moving this big crop through government purchases of fruit for relief use. These purchases supplemented a marketing agreement program under which growers and shippers tried to adjust shipments more in line with what markets could absorb and maintain a reasonable return to growers. During that same season Texas had its first big grapefruit crop, 9,630,000 boxes, three times the size of any previous crop in that State. The 1937-38 Texas crop was around 11,000,000 boxes, and the Florida crop was slightly over 13,000,000 boxes.

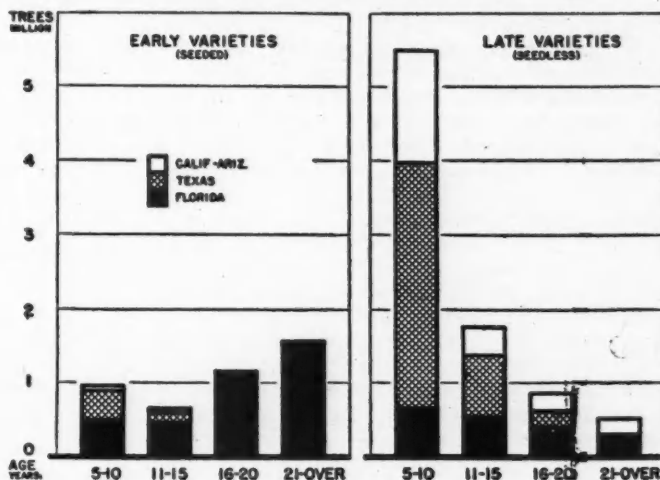
Further increases in grapefruit production, expected in all producing areas, are likely to add to the price problems experienced by the industry. The average on-tree price

to 10 years old are in Texas. For every tree which Florida has in this age group, Texas has about three and one-half trees. The California-Arizona area has more trees in this age group than Florida.

The number of trees falling in the 11 to 15 year-old age group is about the same in Florida as in Texas. California has about a third as many of its trees in this group as either Florida or Texas. Of the total number of grapefruit trees in the four producing States, only 19 per cent are in the 11 to 15 year-old age group.

The number of trees from 16 to 20 years old is greatest in Florida and only of minor importance in the other producing areas. Practically all trees exceeding 21 years in age are located in Florida. There are none in Texas and very few in California-Arizona area.

MOST YOUNG TREES SEEDLESS GRAPEFRUIT



of Florida grapefruit for the last 3-year period indicates some improvement over that which prevailed in the depression years.

Continued sharp increases in grapefruit production in the United States are indicated by the number of bearing trees not yet in production.

In the four grapefruit producing States of Florida, Texas, California, and Arizona estimates indicate a total of 12,777,000 trees. Of this number, 69 percent are not in full production, ranging in age from 5 to 15 years. Only 31 percent of the trees are 16 years old and over, and in full production. Of the total number of grapefruit trees in the four producing states, over 50 per cent are from 5 to 10 years old. It is from these trees that most of the future increase in production is expected to come.

Most of the young trees from 5

The number of grapefruit trees planted in late or seeded varieties is over twice as great as the number planted in early or seeded varieties. The number of grapefruit trees of each variety by age groups in the various producing areas, as of July 1937 is shown in the graph above.

In the Florida, Texas, and California-Arizona producing areas, there are 8,598,000 trees of the late or seedless varieties. Approximately half of these trees are in Texas. Of the total number of late varieties of grapefruit trees, about 64 percent, or 5,499,000, are from 5 to 10 years old. Of this number, Texas has 3,339,000, over 5 times as many as Florida and over twice as many as the California-Arizona area.

Only 21 percent, or 1,754,000, of the late varieties of grapefruit trees are 11 to 15 years old, with Texas having 824,000, approximately half (Continued on page 11)

The Citrus Industry

with which is merged The Citrus Leaf

Exclusive publication of the Citrus Growers and Shippers

Publication office 550 North Broadway, Bartow, Florida
Telephone 280

Published Monthly by
ASSOCIATED PUBLICATIONS CORPORATION
S. L. FRISBIE President
S. LLOYD FRISBIE Secretary-Treasurer
A. G. MANN Production Manager

Subscription, \$1.00 per year in advance

CITRUS MARKETING AGREEMENT IN EFFECT

The Florida citrus marketing agreement went into effect on February 22, having received the endorsement of 96 per cent of the citrus growers, 65 per cent of the citrus shippers and the approval of the United States Secretary of Agriculture.

The agreement, providing for control of grade and size, may result in keeping some undesirable fruit off the market, but failure to provide volume control weakens the agreement to the extent that its effect in raising prices is seriously handicapped. Then, too, coming so late in the season any material aid to the grower is materially lessened, since much of the crop has already been marketed at prices disastrous to the producer.

The most favorable feature of the agreement is that it is to be administered by a Control Committee composed exclusively of growers, with an advisory committee of shippers — acting solely in an advisory capacity.

Some benefit may be derived from the agreement by the shippers of late fruit, but the agreement does not go far enough and growers should unite in demanding a more far-reaching agreement for next season—and they should begin work to that end at once in order that the agreement may be ready at the beginning of next shipping season. Instead of invoking "emergency" measures, as in the case of grapefruit pegging, growers should prepare for the emergency in advance by formulating and enforcing a marketing control measure which will really control.

GRAPEFRUIT PRICE PEGGING HEADED FOR COURT

As was expected, the grapefruit price pegging program is headed for court.

The owner of a Bradenton canning plant purchased grapefruit for canning, paying 20 cents per box at the time of purchase and placing 12 cents per box in escrow, to be paid if and when the pegging law was declared constitutional.

Acting under authority of law, Commissioner of Agriculture Mayo promptly revoked the license of the canner. The issue will be taken to court. Whatever the decision of the court may be, an appeal to a higher court will doubtless be taken. A final decision may be expected sometime—probably after it is too late to do the grower any good this season.

R. B. WOOLFOLK

In the recent sudden death of R. B. Woolfolk, first vice-president of the American Fruit Growers Inc., the citrus industry of Florida loses one of its outstanding leaders.

For nearly half a century Mr. Woolfolk had been connected with the wholesale distribution of fruits and for the past twenty years had been closely affiliated with the citrus industry in Florida, where he enjoyed the confidence, respect and esteem of both growers and shippers.

His sudden passing is genuinely mourned by a large circle of friends in Florida and throughout the nation.

WILL CONDUCT CITRUS SURVEY

The Florida Citrus Fact Finding Institution is the latest body to be organized in the interest of Florida citrus growers.

While the purpose of the Institution is to conduct a survey of the citrus situation, it is to be conducted not by citrus growers but by business men who realize that the welfare of the state is tied up with the citrus industry. It is the thought that a survey by outsiders may develop facts which are obscured by too close connection with the industry.

Former Congressman H. J. Drane of Lakeland is chairman of the Institution, and Frank Hammett is managing director. Offices of the Institution are located in Orlando



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RECENT CHANGES IN THE FLORIDA CITRUS INDUSTRY

(Continued from page 9)

of the total, and Florida 537,000. Only 10 percent, or 857,000 trees are 16 to 20 years old, a little less than half of these being in Florida. Of the total late varieties, 5 percent or 488,000, are 21 years old and over, 288,000 of them being in Florida and none in Texas.

Early or seeded varieties of grapefruit trees in the producing areas total 4,179,000, of which 3,489,000 are in Florida and a little over half a million in Texas.

In all producing States about 23 percent, or 923,000, of the total early or seeded grapefruit varieties are from 5 to 10 years old. Of these, 489,000 are in Florida, while Texas has 392,000. There are 622,000 trees from 11 to 15 years old. Over two-thirds of these are in Florida, nearly one-third are in Texas, and only a few are in the California-Arizona area. The 16 to 20 year old age group includes approximately 27 percent, or 1,112,000 of the early or seeded varieties of grapefruit trees. Of this number Florida has 1,047,000. Trees 21 years old and over represent 36 percent, or 1,522,000, of the total in early and seeded varieties. Of these, Florida has 1,500,000 and Texas none.

Total Disposition of Florida Grapefruit

The increase in the total amount of Florida grapefruit absorbed in consuming channels has been more marked since 1930 than in previous years.

The amount of grapefruit used locally within the State of Florida is small in comparison with the supply available. In recent years approximately a million boxes of fresh fruit have been utilized locally.

The fresh fruit markets are still the most important outlets for Florida grapefruit, even though in recent years the volume from Florida going into these markets has undergone very little expansion.

Marked increases in the amounts of grapefruit used for canning purposes have occurred as the volume of production in the State increased.

During the 1936-37 season the Florida crop of 18,100,000 boxes was so large that all of it could not be absorbed in regular commercial fresh and cannery outlets without seriously depressing prices to growers. During that season the Government assisted the grapefruit industry through purchases of large quantities for relief distribution.

THE CITRUS INDUSTRY

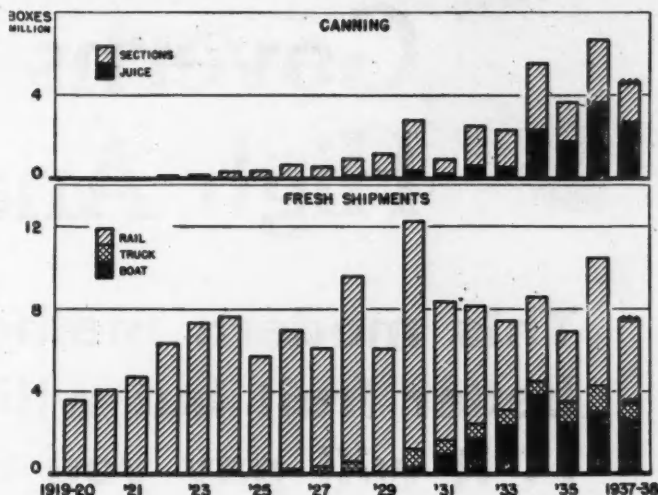
The fact that grapefruit has two types of outlets has grown in importance to the industry as production has increased.

The graph above shows the disposition of Florida grapefruit and the

later was beginning in the California-Arizona area.

Florida's first big output of canned grapefruit occurred in the 1930-31 season, when 2,893,000 boxes of fruit were utilized. It was in that

MORE FLORIDA GRAPEFRUIT BEING CANNED



amount of fruit used for fresh shipment and canning purposes. As indicated by the graph, the amount of Florida grapefruit used for canning has increased very sharply in recent years, while the volume of fruit used for fresh shipments has been maintained at the relatively even level.

During recent years approximately one-half of the grapefruit used by canneries has been for the manufacture of canned juice, while in earlier years practically all of the canned grapefruit was put up in sections.

Florida shipments of fresh grapefruit to markets are now made by rail, boat and truck. During the twenties practically all of the grapefruit moved to market by rail. Since about 1930, the volume of grapefruit shipped by boat has increased very sharply, and the amount shipped by truck has increased gradually, while the volume shipped by rail has markedly declined. This change in method of shipping fruit came into prominence during the depression years when the industry was forced by economic conditions to cut marketing costs.

Grapefruit Canning Increased In All Areas

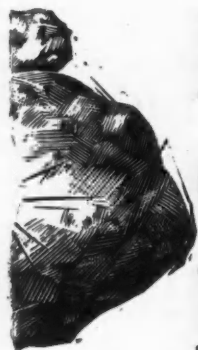
The use of grapefruit for canning purposes has increased sharply in recent years.

Canning of grapefruit began in a small way in Florida in the early twenties. About a decade afterward, canning of grapefruit was under way on a small scale in Texas, and a little

season that Florida had its crop of 16,109,000 boxes of grapefruit, approximately twice the average production in the previous 10 years. The pack of canned grapefruit was almost doubled when a crop nearly as big was produced in the 1934-35 season. The pack that season utilized 5,545,000 boxes of grapefruit out of a Florida crop of 15,200,000 boxes. Out of an all-time record production of 18,100,000 boxes of grapefruit in Florida in the 1936-37 season, a total of 6,723,000 boxes was utilized for canning purposes. Since the 1934-35 season, Florida canners have utilized an average of 35 percent of the annual grapefruit production in the State.

The growth of the canning industry in Texas is more marked than the development in Florida, largely because of the sudden increase in Texas grapefruit production. Before the 1934-35 season canners utilized from a little less than 50,000 boxes to about 100,000 boxes of fruit a year. As production increased, more fruit went into cans. Texas production in the 1935-36 season totaled 2,762,000 boxes, out of which 606,000 boxes were used for canning purposes. The first big crop of grapefruit in Texas came in the 1936-37 season, when 9,630,000 boxes were produced. Out of this crop canners used 2,563,000 boxes of grapefruit, or more than one fourth of the total. With a crop around 11,000,000 boxes for the 1937-38 season, utilization

(Continued on page 14)



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better fruit but will do the job at a lower cost
... it will pay you to study closely**

Calcium Nitrate

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CALCIUM NITRATE is an ideal Spring application to citrus groves.

CALCIUM NITRATE is the only material which provides quick-acting nitrate nitrogen, with water-soluble calcium—two essential plant foods for the price of one.

CALCIUM NITRATE tones up the trees, promotes a vigorous bloom, a heavy set, and uniform maturity.

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best growing
using other
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reducing test
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average.**

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TRADE MARK REG. U.S. PAT. OFF.
A Rich, Complete Fertilizer

There are ten different analyses of NITROPHOSKA, and grades are available with minor elements in quantities fully meeting recommendations of agricultural authorities.

NITROPHOSKA provides an even and steady supply of nourishing plant foods. NITROPHOSKA users tell you this rich COMPLETE fertilizer is very economical, and will help produce better fruit at lower cost. Much of the earliest fruit in the State is produced with NITROPHOSKA.

y Field Men Are Freely At Your Service

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Florida

RECENT CHANGES IN THE FLORIDA CITRUS INDUSTRY

(Continued from page 11)

by Texas canners is estimated at around 4,500,000 boxes.

The volume of grapefruit used for canning purposes in the California-Arizona area has been relatively small but has been rising with increased production.

Grapefruit Shipments Each Month By Areas

The heaviest supplies of grapefruit are on markets from the beginning of October to the end of May, when they begin to taper off until harvesting of a new crop starts in September.

While large quantities of grape-

THE CITRUS INDUSTRY

this area is relatively small when compared with shipments from Florida or Texas. In the markets, California-Arizona grapefruit must compete more with Texas grapefruit than with that shipped from Florida.

Puerto Rico is more of a competitive factor during the month of September, when first Florida shipments begin, than at any other time of the year. Even so, the volume of grapefruit arriving from Puerto Rico is very small compared with market receipts from the Florida, Texas, and California-Arizona producing areas.

Of the total amount of grapefruit shipped to 10 auction market cities, unloads from Florida are heaviest in eastern cities. In fact, practically all of the grapefruit unloaded in these cities come from Florida.

cars, of which 10,012 cars were supplied by Florida, 371 cars by Texas, and 917 cars by other producing areas.

On-Tree Returns Florida Grapefruit Growers

Direct marketing charges tend not to change with a rise or fall in terminal market prices during a particular season. Therefore, any change in terminal market prices is directly reflected in a similar change in the on-tree return.

Marketing charges for Florida grapefruit have followed a downward trend in recent years with the development of more efficient methods of handling the fruit from the tree through the packing house and to the markets. The rate of decline of the auction price for Florida grapefruit has been steeper, however, than the decline in marketing charges. The result has been a lower on-tree return to growers in recent years.

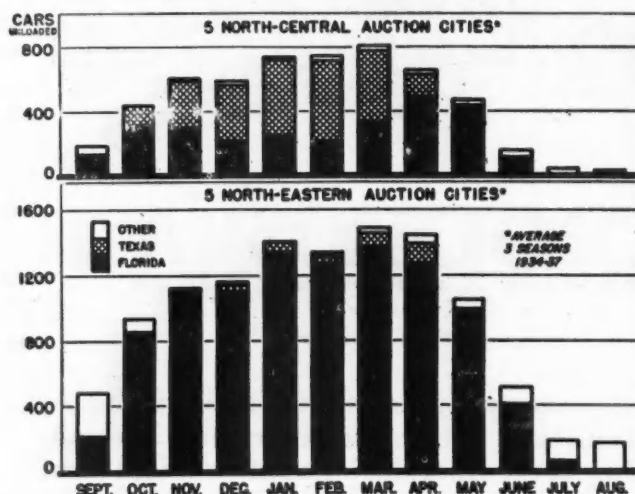
In the early twenties, the difference between auction prices and on-tree returns to growers generally exceeded \$2.25 a box, and from the 1927-28 to 1930-31 seasons ranged around \$2.50 per box. The reduction in marketing charges came during the depression years and they have been maintained at the lower level since. At the present time, marketing charges of approximately \$1.60 to \$1.65 per box are incurred in selling Florida grapefruit at terminal markets.

Although market supplies of grapefruit produced in Texas has increased considerably before the 1936-37 season, Florida had almost complete freedom in selling its increasing production without running into large competing supplies from that State.

The first big crop of grapefruit in Texas was produced in the 1936-37 season. This crop amounted to 9,630,000 boxes, compared with an average of around 2,000,000 boxes produced during the preceding five seasons. The Florida crop in the 1936-37 season totaled 18,100,000 boxes, compared with an average of about 13,000,000 boxes in previous years. With the sharp increase in grapefruit production, Texas became an important competitor in the markets and could no longer be disregarded by Florida growers and shippers.

(Continued on page 20)

FLORIDA GRAPEFRUIT RULES EASTERN MARKETS



fruit are shipped from Florida during November and December, the period of heaviest shipments usually extends from January to about the end of April.

Shipments of grapefruit from Texas are greatest during the 5 months from November to April. Before the 1936-37 season, Texas grapefruit crops were small. The first big Texas grapefruit crop was produced in the 1936-37 season and the State has continued to produce large crops since, offering Florida grapefruit strong competition during the period of heaviest shipments. Because of the Mexican fruit fly infestation, Texas is usually compelled to stop shipping in April, leaving the market clear at that time for the other producing areas.

Heaviest grapefruit shipments from the California-Arizona area begin in January and continue at a fairly even rate to the end of July. The volume of fruit shipped from

The graph above shows carlot unloads of grapefruit from the various producing areas in the five central cities of Chicago, Detroit, Cleveland, Cincinnati, and St. Louis, and unloads in the five eastern cities of Boston, New York, Philadelphia, Pittsburgh, and Baltimore, during the three seasons ending in 1936-37.

Most of the grapefruit unloaded in the central cities comes from Texas. This is particularly true from the beginning of November to the end of March, the period when the Texas shipping season is at its peak. When Texas shipments end, shipments from Florida dominate these central markets.

Florida has had the eastern auction markets almost all to itself except during periods of the year when shipments are just getting under way or are about completed. For example, during the period 1934-35 through 1936-37, unloads of grapefruit in the five eastern cities averaged 11,300

If suffering with Piles, I want to help you. Drop me a line explaining.

FRED C. WHITNEY

317 6th Ave., Des Moines, Iowa

SOME OBSERVATIONS ON IMPROVING FLORIDA CITRUS

(Continued from page 3)

from \$1.00 to \$1.50 per box on the tree and withing thirty to sixty days be bringing from nothing to red ink. If we can do something to improve the quality of our early oranges and hold up the price so they will not destroy our mid-season market, it will do more than any one thing to stabilize a shaky industry.

Now—what can be done to improve this situation? Can it be done by marketing agreements, volume control, high maturity standards or by rigid inspections? Any or all of these may help some, but, in my humble opinion, the only thing that will help permanently is a carefully planned and well executed long range plan of improving our early varieties of oranges. This condition was not brought about in a season and it cannot be corrected in a season. It will never be corrected until we get quality into our early oranges or quit shipping them. I often receive letters asking—"Why is it that Florida oranges vary so in taste and quality?" They say—"When we buy Florida oranges we never know what we are going to get. When we buy California oranges we know exactly what we are going to get. They never fool us."

And there, my friends, is one of the principal troubles. California has two varieties of oranges. One authority gives Florida 63 varieties. She probably has more by now.

A long range plan for improving Florida citrus should include the gradual elimination, by top-working, of so many varieties of early oranges and concentration on two or three of the best varieties. The mid-season and late varieties present no great problem. It is with the early varieties that we have trouble.

Another problem that should be faced in long range planning for the industry is the gradual elimination from production of sub-marginal groves on soil not suited to profitable citrus growing—groves which are and always will be a burden to their owners and a handicap to the industry. Many a grower is struggling with a run down grove that costs him more every year than it brings in. Both the grower and the industry would be better off if such groves were dropped from production.

After we have concentrated on a few of the best varieties, eliminated groves that cannot produce good citrus fruit profitably, and developed

The "Plus Value"
Manganese Sprayis  Brand
TENNESSEE CORPORATION

Feeds Your Grove Vital
Minerals Needed for
Better Fruit!

● When you correct or prevent "Manganese starvation" by using Tee-Cee Brand 65% Manganese Sulphate in Spray Form Grade or in your regular fertilizer formula, you give your trees the element that not only prevents "chlorosis," but aids in production of fruit with a deeper NATURAL color—inside and out.

Moreover, you get a "plus value" that can be measured in dollars and cents—because Tee-Cee Brand 65% Manganese Sulphate analyzes high percentages of Sulphates of Copper, Iron, Zinc, Magnesium and Calcium in water soluble form. Other minerals are present also in lesser quantity. It's Manganese PLUS—that's why 65% Manganese Sulphate (as a spray or in your regular fertilizer) is the most economical.

Insist that the manufacturers of your regular fertilizer include Tee-Cee Brand 65% Manganese Sulphate in the formula you buy. See your local fertilizer dealer, or write for more information.

Distributed by:

U. S. Phosphoric
Products Corp.

Tampa, Florida

- 89% Zinc Sulphate
- Copper Sulphate
- 53% Tri-Basic Copper Sulphate

fertilizer, spray and cultural practices that will produce better flavored and colored fruit with better carrying and keeping qualities, we may then be able to develop better marketing practices and hope for a return of prosperity to the industry.

R. B. Woolfolk

(A tribute paid by one of Mr. Woolfolk's most intimate associates, addressed to members of the Growers and Shippers League).

Undoubtedly every member of the Growers and Shippers League of Florida is aware of the passing of Mr. R. B. Woolfolk in the hospital at Ocala, Florida, just before midnight on Saturday, the 18th inst.

At the time of his death Mr. Woolfolk was serving his fifth consecutive year as President of the League. He was a tower of strength in his loyalty and untiring support, and it is impossible to adequately measure but just as impossible to overstate the value of his services to this organization, the sense of loss we feel, or how greatly we shall miss him.

We are utterly incapable of describing Mr. Woolfolk's splendid personal characteristics—and it is entirely needless that we do so. A true gentleman of the finest type, his innate kindness and wonderful personality made him beloved by everyone fortunate enough to personally know him, and were matters of common knowledge and admiration on the part of thousands who knew him only by reputation.

Now that he is gone, how easy it is to see that, although perhaps entirely unconsciously on his part, he nevertheless in his daily contacts exemplified the thought so beautifully expressed by an author whom the writer does not know in the following:

"I expect to pass through this world only once. Any good therefore that I can do, or any kindness that I can show to any fellow creature, let me do it now. Let me not defer or neglect it, for I shall not pass this way again."

We think no man of our acquaintance is possessed of a greater love for his fellow man than was he, and because of this he was loved by many men in all walks of life.

J. R. CRENSHAW,
Traffic Manager, Growers & Shippers League of Florida
February 24, 1939

SPRAY MANGOS

With first bloom of mangos now appearing, Lee county growers are spraying their trees with bordeaux or dusting with sulfur to control anthracnose, a disease which has become a factor in amount of fruit set, according to County Agent C. P. Heuck.

ADVERTISEMENT — THE LYONS FERTILIZER CO.

The LYONIZER

Department

COMPILED BY THE LYONS FERTILIZER CO.

Grower Reports Money In Citrus

L. G. Ferris, citrus grower, living near Inverness, last week said, in answer to a direct query as to whether he was making money in the growing of citrus fruit:

"Yes, I make money out of growing oranges. In the six years I have had active personal charge of the grove, it has never failed to show a profit."

"An orange grove has to go ahead. It can't stand still," said Mr. Ferris, and further developing his subject Mr. Ferris stressed the importance of "Quality" in the operation of a profitable grove.

In discussing Mr. Ferris' methods an article in the Tampa Times of February 16th included the following statement: "Every day in the year, every year, Mr. Ferris concentrates on improving the quality of the fine fruit grown on his 200-acre grove, located on Duval Island in Lake Tsala Apopka.

"How well he has succeeded can be attested by a quick glance at reports from large Eastern auction markets. During three days last week prices offered for Mr. Ferris' fruit, shipped under the trade name 'Mamy Brand' topped all other citrus offered for sale on the Philadelphia Auction Market."

All of which furnishes another example of what the production of Quality Fruit can accomplish for the growers who produce it.

Incidentally we would like to mention the fact that Mr. Ferris is a customer of Lyons Fertilizer Company and uses our fertilizers and the Lyonize service plan.

At a luncheon of newspaper men the following toast was offered:

"The ladies! Second only to the press in dissemination of news."

WE ARE going to venture a prediction. Such a course is frequently accompanied by hazards, but since our prediction is based in part upon historical fact, we believe it worth while making at this time.

Speaking of the historical aspect of the matter we would call attention to the fact that it is a most rare occurrence when the citrus industry has gone through more than two consecutive seasons of relatively low prices.

So, our prediction is that every citrus grower in Florida is going to be rejoicing during the next season for every box of fruit he can possibly grow, IF that fruit is of sufficiently High Quality.

General business charts over the country indicate that there is a slow, but steady, development of improved economic conditions.

The consumption of citrus fruit and citrus fruit juices per capita is still pitifully low—definitely indicating that over production is not a major problem.

The constantly increasing tendency of the medical profession to recommend citrus fruits, and of the public to accept the meritorious effects of citrus as a fact, cannot fail to largely increase the demand for our citrus.

The need for intensive merchandising in connection with industry advertising is now being commonly admitted by all shippers, with the result that the coming season will doubtless see the most effective work of this sort ever done by the industry.

The painful effects of shipping unpalatable fruit to market early in the season, we believe, is gradually being generally recognized and we look for a decrease in this disastrous practice.

The need for closer harmony between growers as a whole is more widely admitted now than ever before in the history of the industry.

So, again we say, the Florida citrus grower who conscientiously cares for his grove, fertilizes it with high grade honest fertilizers, and otherwise cares for it to the best of his ability, with the idea of producing fruit that is truly outstanding in Quality, is going to be mighty glad this coming season that he followed the original agriculturist's habit of looking always ahead.

ADVERTISEMENT — THE LYONS FERTILIZER CO.

MARCH SUGGESTIONS FOR GROVE CARE

Prepared By Horticultural Department, Lyons Fertilizer Company

CULTIVATION

If weather is dry harrow grove every ten days to two weeks to conserve moisture. Remove banks around young trees.

PEST CONTROL

Watch for aphids, Rust Mite, and Red Spiders. Use Nicotine Dust or Nicotine Sulphate for the first, and Sulphur Dust and Lime Sulphur solution for the last two.

FERTILIZER

Fertilize young trees. Also bearing trees that have not yet received the regular Spring application.

PRUNING

Remove all dead wood from trees.

COVER CROP

Arrange for seed for cover crop so that you will have them when ready to plant.

GENERAL

The "Lyons Field Man" in your territory will be glad to call on you and work out a special program for you under our "Lyonize Your Grove Service."

Idle Fancies

Some men who neglect their wives the rest of the year get mighty sentimental on St. Valentine's Day.

When a bride is both ugly and poor, she may be sure that the bridegroom loves her "for herself alone."

Only a fool will try to pass a motorcade traveling at fifty miles an hour with the cars spaced twenty feet apart with another motorcade traveling at equal speed and with cars just as closely spaced coming in the opposite direction.

Observation compels the statement that there are plenty of fools.

Mr. Johnson, President of the Stadler Products Company of Cleveland, Ohio, together with his wife, is in Florida to spend a couple of months at Oxmoor Estate, situated on Lake Harris. Mr. Johnson's Company owns the property, which comprises 41 acres of grove, a lovely residence, and a fine boathouse and dock. He is quite a fisherman, and has added to his collection of boats, a new Chris Craft Speed boat.

Gob: "Every time they fire one of those guns \$1,000 goes up in smoke."

Ship's Visitor: "Why don't they use smokeless powder?"

Because these Products are Manufactured in Florida for use on Florida Groves

We Recommend

**ORANGOL
SPRAY
EMULSION**

**OBRITE
DUSTING
SULPHUR**

**"SUPERIOR"
WETTABLE
SULPHUR**

**For control of citrus
insects and disease**

Manufactured by

**Orange Manufacturing
Company**
Orlando, Florida

**Lyons Fertilizer
Company**
Distributors

*Little Bits
of
FUN*



Miss Peek (to librarian) "I have brought this book back. Mother told me it wasn't fit for a young girl to read."

Librarian: "I think your mother must be mistaken."

Miss Peek: "Oh, no, she isn't, I've read it all through."

Tourist: "Don't stand there like a fool, man. Run and get the village doctor."

Native: "Sorry, Mister, that's him you just run over."

Employer (to applicant for position who has handed in testimonials from two ministers): "We don't work on Sundays. Haven't you a reference from someone who sees you on week days?"

The prodigal son had returned. "Father," he inquired, "are you going to kill the fatted calf?"

"No," answered the old man, looking the youth over carefully. "No, I'll let you live. But, I'll put you to work and train a lot of that fat off."

"How did the Dulan wedding come off?"

"Fine until the minister asked the bride if she would obey her husband."

"What happened then?"

"She replied, 'Do you think I'm crazy?' Then the groom, who was in a sort of daze, answered 'I do.'"

Youth: "Would you scream if I should kiss you?"

Sweet Young Thing: "Of course but I don't suppose it would do any good because there is nobody home."

"Now, be sure to write plain on those bottles," said the farmer to the druggist, "which is for the horse and which is for me. I don't want anything to happen to that horse before I get all the hay cut."

Florida Citrus Fact Finding Institution Establishes Offices

Former Congressman H. J. Drane, chairman of a committee of business men that met recently in Lakeland announced the Florida Citrus Fact Finding Institution, as a permanent organization, not operated for profit, for the benefit of the citrus growers of Florida. It will function under a trusteeship.

The three trustees were appointed as follows: H. J. Drane, of Lakeland, chairman, well known Polk county business man, and former congressman from Florida; Merrill P. Barber, of Vero Beach, young business man, bank director, and treasurer of the Florida State Junior Chamber of Commerce, and Frank R. Hammett, managing director, citrus public relations counsel of Orlando. The trustees are to serve without compensation, with the exception of the managing trustee whose salary was fixed at \$250 a month.

An advisory board consists of 11 business men and 11 citrus growers. The advisory board of 22 members must be selected as follows: Eight business men and 8 citrus growers from the 7 citrus districts of the state and 3 business men and 3 citrus growers from the state at large. Operation funds are pledged by busi-

ness men of the state. All funds and the purpose of the use of same are vested in the trusteeship as legally set up. The declaration of purpose is positive policy and procedure that the fact finding body must follow.

The institution will survey and analyze the individual growers conditions, and obtain facts as to why the growers find themselves with income below production costs. It will analyze these facts and report these findings to the growers for their benefit and action. It will encourage

the present county growers membership and activity. Facts prove Growers associations are beneficial and essential and the Florida Citrus Fact Finding Institution at all times recommends every individual grower to maintain active membership in his County Growers Association. The Institution will study citrus laws not only in other citrus producing states but in Florida also. It will engage skilled individuals for the investigation and analysis of these laws, and employ legal counsel to draft therefrom corrective measures to be presented to the legislature. But not without first obtaining from the growers themselves their endorsement of such corrective measures. The institution will immediately report to the grower any lack of prop-

IRRIGATION AND SPRAY EQUIPMENT

STATIONARY OR PORTABLE SYSTEMS
GENUINE AMES LOCK SEAM SLIP JOINT PIPE

THERMOMETERS — H-B Self Registering and Alarm Types

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Machinery and Industrial Supplies
Citrus Packing and Canning Supplies

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REA NITROGEN—HAS ALL THREE OF THESE DESIRABLE QUALITIES

RESISTANT TO LEACHING. It "stays put." Effective in wet seasons.

EQUIVALENT ACIDITY LOW. Citrus trees respond best to nitrogen from non-acid-forming or only slightly acidic sources

AVAILABILITY COMPLETE. 100% available

... IS TRIPLE-PLUS NITROGEN

WHEN the plant food in a fertilizer possesses the foregoing three properties, you may be sure it will give good results. Du Pont UREA NITROGEN rates plus (+) on all three. That's why manufacturers are using more and more "URAMON" and Urea-Ammonia Liquor in their complete fertilizers and top-dress-

ers. That's why more and more citrus growers, when they apply nitrogen only, are turning to "Uramon," the semi-granular, Triple-Plus high-nitrogen fertilizer, which is free-flowing, easy to handle and apply. Your fertilizer manufacturer is in a position to supply your requirements. Write for booklet "Urea—Triple-Plus Nitrogen."

"Uramon" Fertilizer Compound
Reg. U. S. Pat. Off.
(42% Urea Nitrogen)

Urea-Ammonia Liquor
(45% Nitrogen)



E. I. DU PONT DE NEMOURS & CO., INC., Ammonia Dept., Wilmington, Delaware... Orlando, Florida

SCORE

+++

er enforcement of citrus laws, and follow the growers' mandate as to the adoption of means to compel legal enforcement.

"The Florida Citrus Fact Finding Institution has been created as a voluntary movement on the part of business men in the state, who realize the seriousness of the citrus situation on Florida business in general," Drane said. "It has been set up as a ways and means of gathering facts for the benefit of the growers and to bring about corrective measures. It is an institution to obtain facts, not opinions.

"Its organization has been the result of over 1000 interviews with leading business men of the state who expressed the unanimous belief that something was radically wrong with Florida's citrus marketing system. When other citrus producing states continually command a higher market price, and California alone, twice the distance from principal markets, with double the freight rate, can still maintain a market price to return a profit to the growers, there is not another answer, but what the fault is with us. The differential of approximately 60c in freight alone if added to the Florida growers present market price would mean the difference between a profit and bankruptcy on the part of the Florida Growers.

"Florida's citrus industry is not bankrupt. But it will be unless the cause of the present condition is found and a remedy applied. We believe the efforts of this new institution as created, along the lines of similar fact finding institutions, functioning for the benefit of other lines of industry, of digging into the facts for the growers use, and then by following through with corrective measures, that the Florida citrus growers may not only be allowed to realize a profit, but that every acre of citrus producing land in the state will materially increase in value, and the state's wealth be thereby increased. Florida business men are vitally interested in such a result."

Frank R. Hammett, managing trustee, said, "I am manager for the trustees whose declaration of purpose is the positive policy and procedure that must be followed. This makes the Florida Citrus Fact Finding Institution's activities limited to the finding of facts and then turning these facts over to the grower. The Institution cannot act any further without approval of a majority of the growers.

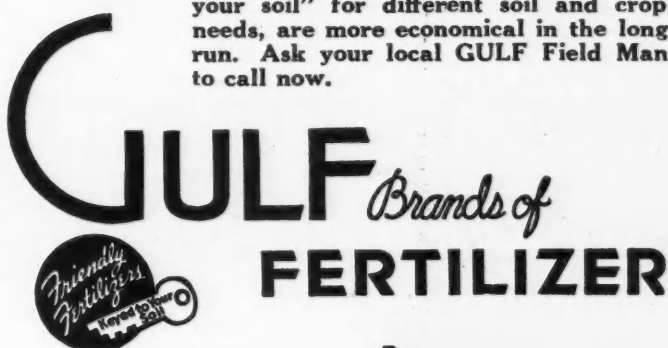
"All findings of the Florida Citrus Fact Finding Institution will be made available to growers own state association, the Florida Citrus Growers, Inc., with the assurance that the facts will be transmitted to every known citrus grower in the state by mail referendum, for approval or disapproval of the growers as to further action. The cost of such growers referendum will be the financial obligation of the Florida Fact Finding Institution."

PROVEN YEAR AFTER YEAR:

"It Pays To Use QUALITY Fertilizer"....

• Because each year more and more evidence accumulates to prove the point, we continue to urge growers to use QUALITY fertilizers for the most economical results. And by QUALITY fertilizers we mean complete, balanced fertilizers formulated from high-grade materials that give your trees the right plant foods in the right amounts at the right time, and give YOU a full measure of value for your money.

To help you determine just what your grove needs, we urge you to have the GULF Field Man in your section make a survey and recommendations. That's the way many of your neighbors are proving that GULF Brands of Friendly Fertilizer, because they are "keyed to your soil" for different soil and crop needs, are more economical in the long run. Ask your local GULF Field Man to call now.



For Everything that Grows
in Florida . . . use



THE GULF FERTILIZER COMPANY

36th Street, South of East Broadway, Tampa, Florida
East Coast Factory — PORT EVERGLADES, Florida

Citrus Puts A Tang In The Family Menu

BY ISABELLE S. THURSBY
ECONOMIST IN FOOD CONSERVATION
STATE HOME DEMONSTRATION DEPARTMENT

What we like to eat is much more interesting to us at this season of the year that what we should eat, but it's fine when we can find a food that is both good for us and highly pleasant to us.

Citrus fruit is in that category. In fact, citrus is crammed full of minerals and vitamins, the very things on which nutritionalists harp, and they also have a delightfully pleasing flavor.

Nobody has to urge us on these crisp, frosty mornings to drink a glass of orange juice squeezed from a big, luscious Florida orange, or from a fine, full-flavored grapefruit just because its good for us. We reach for it the first thing ourselves, because we know it tastes good and not because we want to make sure of our vitamins and other prospective elements.

Oranges and grapefruit, kumquats and limequats, satsumas and tangerines, limes and lemons, are full of the quintessence of what is good for us and what tastes good to us.

We are not surprised to know that the ancients of far Cathay and Palestine thought of the oranges as a special gift of the gods, nor that the people in the basin of the Tigris and Euphrates to this day maintain that Eve gave Adam an orange and not an apple.

The tang they add to cooking, the pep they put into cakes and cookies and candies, make citrus fruits the answer to the housewife's prayer. They may be used in so many delicious food combinations in their natural state and they blend so well with other fruits to make flavorful beverages, salads, and any number of desert combinations—especially when there is need for haste. Beginning with the breakfast glass of orange juice, our Florida citrus fruits may appear in every course in every meal, fitting into the menu at every turn, as every Florida housewife surely knows.

To further add interest and tang to the menu there are citrus syrups, jellies, marmalades, butters, preserves and conserves that have their place as delicious and wholesome "spreads" for sandwiches, for the breakfast toast, griddle cakes, waffles, French toast, hot biscuit and

butter. They may be served as a pudding sauce, or as a dressing for ice cream and sundaes. Not only that, but Florida housewives make use of them as filling and flavor for fancy breads, tarts, pastries, cakes, cookies and candies, as trimmings for pies and puddings, combine them with whipped cream, for frostings, meringues, and serve them baked, or pickled and spiced as a snappy accompaniment for the meat course.

From our wealth of delicious citrus fruits, growing even in the northern sections of the state, along with pecans and rich black walnuts, our appreciative Florida housewife finds a variety of uses in making delicious cakes and fancy breads. The juice, pulp, and peel can be used in the butter, and for flavoring both fillings and frostings. The peel, grated, chopped or candied may be used in fine frostings and icings in pies, desserts, and sauces.

Certainly there is no place in a Florida pantry for artificial or synthetic flavorings.

Of all the popular desserts—and the one that is surely Florida's own—is ambrosia. This time-honored dish of the South is a most fitting finish for a heavy dinner, good as a balance for the heavier foods. And it should be served generously.

As for other types of Florida desserts we have orange and grapefruit shortcake. With lemon pie voted as one of the favorite desserts of masculine America and with so many delicious recipes for the use of not only lemons, but Persian limes, grapefruit, calamondins, and the old wild or Seville orange and other interesting citrus fruits, we have pie flavorings that stand second to none. Indeed, there is nothing quite as elegant for ending the company meal as a serving of a lovely, golden, flaky citrus pie, topped with a golden

RECENT CHANGES IN THE FLORIDA CITRUS INDUSTRY

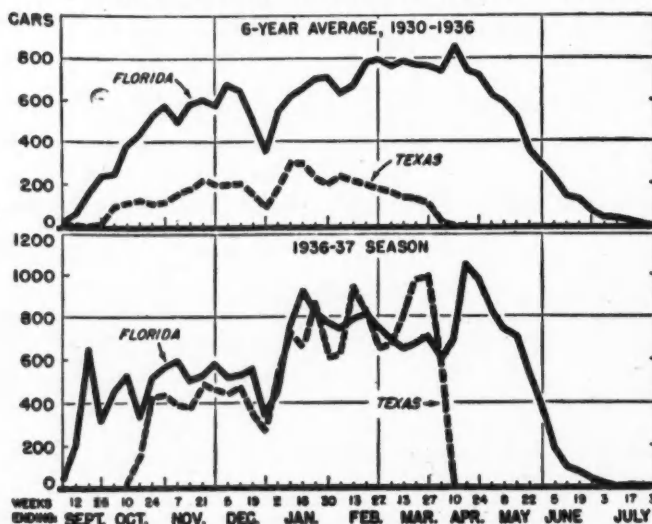
(Continued from page 14)

The graph below shows average shipments of grapefruit from Flor-

when Texas had its first big crop.

If normal growing conditions prevail in the next five years, crops of grapefruit from Florida are likely to exceed that State's record production in the 1936-37 season, and

GRAPEFRUIT SHIPMENTS FROM TEXAS NOW APPROXIMATE FLORIDA LEVEL



ida and Texas in the period from 1930-31 through 1935-36 when production in Texas was light, and shipments during the 1936-37 season

grapefruit crops for Texas may be even greater than the big crop of 11,000,000 boxes produced in the 1937-38 season.

brown meringue or whipped cream.

Among some of the products in cooked form that have taken a very popular place over the state, and which should become increasingly popular—for to know them is to like them—one might mention the Orange Crumb Pie, Grapefruit Meringue Pie, and Persian Lime Chiffon Pie; Calamondin Cocoonut Cake, with Calamondin Cocoonut filling and Calamondin icing.

A delicious orange dessert cake calls for one orange that is ground up in the fresh state and incorporated in the batter. The use of the orange in this way gives the cake that fresh, delicious fruity flavor.

There's a Tangerine Cake that's a favorite with many; a Lady Flora Cake, with a marvelous filling, rich in a melange of most enticing citrus fruits, held together by a blend of sugar and orange juice and butter.

Florida Citrus Fruit Cake is another whose delicious proportions of goodly fruits other than citrus are all home grown and home crystallized in the Southern section of the state.

Orange candied sweet potatoes, or just mashed and seasoned with sweet potatoes baked in the orange half shell gives just the right flavor. Orange Marmalade sauce served with baked ham, lamb chops broiled with orange segments and grilled grapefruit are delicious dishes.

Here is a recipe for Orange Breakfast Bread—a delicious cake-like bread that is just right served for Sunday morning breakfast or for a supper dessert any day of the week.

It requires:

- 1 ½ cups of cake flour, sifted before measuring,
- 2 teaspoons baking powder
- ½ teaspoon of salt,
- ½ cup powdered sugar,
- 1 egg slightly beaten, and

Juice and grate rind of one medium sized orange; more juice if necessary. Sift dry ingredients together into a bowl. Beat the egg, add the grated orange rind and the juice and stir into the dry mixture, beating just enough to dampen all the ingredients. It may be necessary to add more orange juice, or water. The dough should be of a little thicker consistency than for ordinary layer cake. Spread the dough an inch thick in a 9-inch round pan preferably, or an 8-inch square one. Sprinkle the top thickly with powdered sugar and pecans, dot with bits of butter, and bake in a moderate oven (375 degrees) for 20 to 25 minutes or until nicely browned and firm when

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Guaranteed Non-Arsenical

Ripens your fruit earlier and keeps it ripe, ready for picking when the market is right.

Economical, can be used with other spray material except oil.

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raises sugar content, lowers acids, stabilizes juices, produces texture and real quality . . .

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Spray At Any Time Any Temperature!

Cut down your percentage of culls and number three grades.

SCALE ?

Red . . Purple . . Cottony Cushion . . or what have you.

DOUBLE X

Controls Them and Checks

MELANOSE AND SCAB

Will Not Burn

National Products Corp.

Orlando, Fla.

tested with a toothpick. Cut in wedges or squares and serve warm.

Baking is one of the finest arts of home making. To bake and serve delicious home-made products, made rich and flavorsome by the use of fine citrus fruits, marks you as an extraordinary home maker.

A Communication

ORANGE WINE

Editor The Citrus Industry:

I have just returned from a trip to Italy where I was purchasing lemons for the New York market.

My reason for sending you this letter is because you may be able to give me some information in reference to orange wine which I found in Italy. I was treated to a bottle containing a splendid product labeled "Orange Wine." It was a beautiful rich yellow body, delicate flavor of the natural orange fruit; alcohol content about 15 percent.

The question I would like to have answered is why can't we have orange wine here in the United States of America? Has anything been done among citrus growers in the great orange belt in Florida about making orange wine at any time? Have any of the experimental citrus laboratories done any work along this line?

Perhaps our U. S. A. oranges hold too much citric acid or malic acid. Perhaps it is the water here, like Scotch whiskies cannot be made here with our water.

You may publish this letter in your next issue and I would be very much obliged for any light which may be thrown on the subject. I would like to get in touch with any parties who have experimented in making orange wine. I am now making arrangements to have a case sent to me from Italy.

THOMAS P. A. KELLY,

2069 Ocean Parkway,
Brooklyn, N. Y.

**DR. NEWELL IS NAMED
"MAN OF THE YEAR" IN
FLORIDA AGRICULTURE**

Dr. Wilmon Newell, provost for agriculture at the University of Florida, has been named "man of the year" in Florida agriculture for 1938 by Progressive Farmer, well known Southern farm journal. This is the second year such honors have been bestowed on Southern farm leaders by the magazine.

Among Our Advertisers . . .

CHARLES F. DALY JOINS SUPERIOR ORGANIZATION

Mr. Charles F. Daly, who has been identified with the fertilizer industry of Florida for the past number of years, has recently joined the organization of the Superior Fertilizer Company, of Tampa, in the capacity of Vice-President. Mr. Daly, for the past two years, has been associated with the Hector Supply Company, in Jacksonville.

Mr. G. D. Sloan, President of the Company, in announcing Mr. Daly's affiliation, stated that Mr. Daly would be responsible for office management, credits, and collections. Mr. Daly is a native Floridian and secured his education in Florida. He is an accountant of a great deal of experience and Superior Fertilizer Company is to be congratulated on securing the services of a man so well qualified to fill the position to which he has been elected.

The marine corporal, proud of his new blues, was standing in the railway station. A nice old lady saw him and made the obvious mistake.

"Here, boy!" she said, holding forth a battered suitcase.

"But ma'am," protested the blushing corporal, "I'm a marine."

"That's all right," she answered, "I'll trust you anyway."

CLASSIFIED ADS

CITRUS BUDS AND SEEDLINGS—Jaffa, Pineapple, Hamlin buds on Sour Stock. Sour Orange Seedlings. R. P. Thornton and H. S. Pollard, Copthorn Nurseries, Box 2880, Tampa, Florida.

CITRUS SEEDLINGS
Cleopatra, Sweet Seedlings, Sour Orange, Rough Lemon, Grapefruit. New low prices. Grand Island Nurseries, Eustis, Fla.

ALYCE CLOVER
Fresh crop, cleaned, and inoculated. Also Crotalaria Spectabilis, In termidia, Striata. Write for new low prices. Grand Island Nurseries, Eustis, Fla.

VERY EARLY ORANGE—For profit plant Soar's Sweet, the new early orange that passes high test early in September; ripens twenty to thirty days before standard early varieties, has better flavor, very juicy and does not dry out on lemon. Pomona Nurseries, Dade City, Fla.

ALYCE CLOVER SEED. Ripe and cleaned. Ideal cover and hay crop. Write for information. P. E. Snyder, Box 866, Lakeland, Fla.

CROTALARIA SPECTABILIS — Fresh crop, \$15.00 per 100 lbs. f. o. b. Frostproof, Fla. Milton Woodley, Frostproof, Fla.

CHOICE Rough Lemon Seedlings 6 to 20 inches high, \$10.00 per thousand. Olan Altman, Sebring, Florida.

WANTED — Two thousand sweet seedling root stock, lining-out or better. H. M. Sherwood, Fort Myers, Florida.

"MAIL ORDER Operator desires contact with grower of high grade avocado pears. Have interesting proposition for grower of highest quality fruit." F. R. Gardner, P. O. Box 528, Greenville, Pa.

FOR SALE—2000 Riverside No. 10 Grove Orchard Oil Heaters used only two seasons, excellent condition. 70c each, F.O.B. Marianna subject to prior sale. Marianna Fruit Company, Marianna, Fla.

AVOCADOS — All desirable varieties. Haden Mangos, Persian Limes, superior budded Loquats. Coral Reef Nurseries Co., Homestead, Florida.

CITRUS NURSERY TREES
All standard varieties and novelties, on Cleopatra and Sour Orange root. Grand Island Nurseries, Eustis, Fla.

MANURE — Stable and Dairy Manure in car lots. Write for prices. P. O. Box 2022, Jacksonville, Fla.

STANDARD varieties of citrus trees including Persian limes and Perrine lemons at reasonable prices. Ward's Nursery, Avon Park, Fla.

GROWERS

Will pay cash for your orange wood whether in trunks or other forms. State full details as to location of groves, etc., in your first letter. Write: T. J. Bumferd, 41 Maiden Lane, New York

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Therefore, Natural Chilean Nitrate is agriculturally valuable both as a source of nitrate nitrogen, and to furnish, or build up a reserve of other plant food elements naturally blended with it.

Use Natural Chilean Nitrate—take advantage of its quick-acting nitrogen and its many protective elements. It is well-suited to your crops, your soil and your climate.

**NATURAL
CHILEAN
NITRATE OF SODA**

Florida Growers, Inc., Detail Proposed Re-Construction Laws To State Press...

At a meeting held at the Columbia Restaurant in Tampa Friday night, March 24, leaders of the Florida Growers state organization entertained representatives of 28 publications in the citrus belt at a sumptuous banquet, following which a detailed outline of the purposes of the organization was presented the group, together with a comprehensive outline of proposed "reconstruction" legislative program which the Growers will submit to the forth-coming meeting of the state legislature for passage.

R. M. Clewis of Tampa, acted as master of ceremonies, E. D. Lambright, editor of the Tampa Tribune, made a highly interesting talk telling of the troubles which now beset the industry and stressing the need of unity in bringing order out of existing chaos.

L. H. Kramer, Lake Wales, state president, outlined the purposes of the organization, while J. J. Banks, Jr., vice president further stressed the purpose of the group and besought the support of the publications.

E. G. Todd, of Avon Park, then detailed comprehensively the various legislative enactments which the growers were planning to submit for approval by the state legislature.

Resume of Growers Re-Construction Legislative Program

The chief item in the Legislative Program of Florida Citrus Growers, Inc., consists of changes in the fruit maturity law. These changes include:

1. All fruit shall show definite break in color before picking.

2. Individual fruits shall be tested instead of a mixture of juices from a large number of fruits. If 10% of the individual fruits fail to meet the test requirements the whole batch is to be turned down. This change is designed to prevent mixing green fruit with mature fruit now regarded as the chief violation of maturity test laws.

3. Fruit for canneries will be required to meet the same standards of ripeness and quality as that intended for fresh fruit marketing.

Grapefruit

The ratio of solids to acids is proposed to be changed as follows:

Solids	Ratio	Acids
7 to 9	7 to 1	6.95 to 1
9 to 9.1		6.50 to 1
9.9 to 10		6.50 to 1

The ratios are on a sliding scale and are lowered in proportion to the total amount of solids. Juice content is proposed to be raised 10 per cent above the present law, that is, the legal juice content required is exactly the same as was required under the citrus commission's ruling

in December, which raised the juice requirement 10 per cent. Under the new law it is proposed that the commission at its discretion may raise or lower the juice requirement 10 per cent from the new standard set by the proposed law.

Oranges

1. Under the proposed law the juice of oranges would be required to contain 4/10 of 1 per cent anhydrous citric acid. Two objects are contemplated in this requirement. One is to prevent insipid fruit getting on the market. The other is to prevent the use of arsenic sprays, as oranges sprayed with arsenic tend to lose acid and become insipid.

2. Oranges will be required to yield 4 gallons of juice per box.

3. The juice of the fruit will be required to contain 7 1/2 per cent minimum solids and the ratio of acids to solids will be on a sliding scale

OBJECTIVES OF THE FLORIDA CITRUS GROWERS, INC.

1. To give the citrus grower control of his industry—

Through an industry program designed to obtain for the grower a fair net return on his investment.

2. To reduce cost of production, processing, distribution by—

Elimination of uneconomic grove practices.

Elimination of all processing and distribution costs not vital to the maintaining of quality fruit or the broadening of markets.

3. To permit only quality fruit to reach our consumers by—

Effective green fruit laws.

Improved cultural practices.

Quality grades.

Elimination of all processing practices adversely affecting quality.

Improved shipping and distribution practices.

4. To regulate the quality and quantity of citrus fruit moved in all commercial channels by—

Establishing laws and Marketing Agreements to provide for orderly distribution.

5. To organize our selling to effectively compete with organized buying by—

Elimination of all inefficient, irresponsible shipping agencies, particularly those agencies refusing to cooperate on a constructive program.

Coordinating all sales through a few centralized sales agencies.

Maintaining prices to net the grower a fair net return on his investment.

as follows:

Solids	Ratio	Acids
7.5 to 8	10.5 to 1	
11 and over	8 to 1	

4. If "color-added" is continued "color-added" oranges will be required to yield 4 1/2 gallons of juice per box and the ratios of solids to acid will be .5 higher than for fruit not treated with "color-added."

Tangerines

Tangerine juice will be required to show a minimum of .6 per cent anhydrous citric acid and the ratio of solids to acid will be as follows:

Solids	Ratio	Acids
less than 10	7.50 to 1	
10.90 and over	7.0 to 1	

The law will give inspectors the right to inspect fruit at any place and under any conditions they regard as desirable for its proper enforcement.

The work has been done by a legislative sub-committee headed by John M. Criley, Terra Ceia, and with the enthusiastic cooperation of J. J. Taylor, Mr. Copeland and other members of Mr. Mayo's inspection division, together with Dr. A. F. Camp, of the State Experiment Station, and Dr. A. L. Stahl of the University of Florida, R. B. Thornton, Tampa, and many other distinguished authorities in these fields.

Coloring

Closely rivalling in importance the maturity test has been the abuse of coloring methods. Intensive investigations have been carried on in this field by a committee of which George I. Fullerton of New Smyrna, is chairman. As Mr. Fullerton so often says, "there is no need of going to a lot of trouble and expense in making inspections of fruit for maturity if the quality and flavor of the fruit is to be destroyed by abusive coloring practices." In investigating coloring practices it has been discovered that much of the harm results from picking and attempting to color immature fruit. Consequently, a great deal of good is hoped to result from the proposed maturity law. One provision in particular is expected to be helpful. That is the requirement that the fruit show a definite break in color before it is picked. No other definite recommendations have been made up to this time.

Research

Upon the recommendation of W. L. Barnett, chairman of the Research Committee of Florida Citrus Growers, Inc., the organization will ask for an annual appropriation of \$6,000 specifically to be used for studying citrus maturity. The organization will recommend that the allocation of

(Continued on page 15)

In the field - In the grove The Sign of Quality



Quality yields demand quality prices. And the best assurance of quality yields is to start your crops off right and feed them properly throughout the growing season. This is the reason Armour's has been the popular plant food in this section for years — it is made in Florida by men who know Florida crops and soils. It is properly balanced, and reaches you in fine mechanical condition ready to go right to work and stay at work.

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